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General Agent for Hamilton, Treasure City and Shermantown.

(Three Fine Mining Districts)

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Agent in New York

JOHN J. KELLY, Jr., 57 Broadway and 9 Canal Street.

PRINCIPAL OFFICE:

424 California Street, San Francisco.

L. W. COE, President.

WHITE PINE:

ITS

OGRAPHICAL LOCATION, TOPOGRAPHY, GEOLOGICAL FORMATION;

MINING LAWS; MINERAL RESOURCES;

Towns; Surroundings;

ate, Population, Altitude and General Characteristics; Condition of Society;

HOW TO REACH THERE;

T IT COSTS TO GET THERE AND LIVE THERE; WHEN TO GO THERE; ETC., ETC.

From the original Letters in the DAILY ALTA CALIFORNIA, carefully revised, amended and corrected,

By Albert S. Evans.

SAN FRANCISCO:
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WHITE PINE

As Seen in November, 1868.

From the Alta of November 26th, 1868.

Having returned from the White Pine silver region on the 23d instant, the writer will now proceed to describe the new La Plata as he found it, endeavoring to give the simple, well authenticated facts as they came under his observation.

The writer would here remark that he does not own an interest of any kind whatever in the State of Nevada, and in making this report he will endeavor to follow the instructions of the proprietors of the Alta, stating merely the facts, without exaggeration. However remarkable the statements may appear, they can all be substantiated by a host of witnesses. An increase of the already great excitement is to be deplored, as it may lead many to suffering and disappointment; but White Pine is a gigantic fact which cannot longer be ignored, and the public may as well know all about it at once.

LOCATION OF THE DISTRICT.

The White Pine Mountain and group of parallel hills comprised within the White Pine District are situated on the southern boundary of Lander county, Nevada—possibly extending partially over the line into Nye county—120 miles (by the road) in a southeastern direction from Austin, and about 720 miles from San Francisco, by the route now travelled. As near as can be ascertained, in the absence of complete surveys, they are located in lati-

tude 39° 10′ north, and longitude 38° 30 west. The principal mines (on the summit of Treasure Hill) are supposed to be at an altitude of about 9,000 feet above the level of the sea.

TOPOGRAPHY OF THE DISTRICT.

The District takes its name from the White Pine Mountain, a bold peak rising from the plain, like Mount Diablo (which it resembles somewhat in outline and apparent altitude, as seen from the valley below,) on the western slope of which veins of silver ore of fair quality, but not very great extent, were discovered three years since, and where the Monte Cristo Mill, erected by an Eastern Company, is now located. But the mines, which are now astonishing the world and setting our population half crazy with excitement, are not located in the White Pine Mountain proper. The White Pine Mountain runs nearly north and south, and may be about ten or twelve miles in length. Its estimated height above the level of the sea is 10,000 feet. Running parallel with this mountain on the eastern side is a lower mountain, called the Base Range, which is three or four miles in length, and supposed to be 8,000 feet in height. Parallel with this range is Treasure Hill, on which the richest mines are situated. This hill or mountain is nearly 1,000 feet higher than the Base Range, and the supposed altitude is at least 9,000 feet. East of Treasure Hill lies a low, broken range of hills, of much less height, in which few mineral deposits have been found. The distance from the eastern line of the Treasure Hill deposits to those on the Diamond Valley side of the White Pine Mountain, cannot be more than eight miles; and the metalliferous belt is perhaps four or five miles in extreme breadth from north to south. In the Base Range are numerous deposits, as yet but little developed, of which we shall speak hereafter.

GEOLOGICAL FORMATION.

As yet it is impossible to give a clear and reliable diagnosis—if we may be permitted the expression—of the geological formation of this wonderful district. No shaft has been sunk more than sixty feet perpendicularly into the hill, and nowhere has the horizontal drifting extended more than 100 feet; so that the geological formation can

only be judged from the superficial indications and outcroppings. The entire country east of Austin, where the country rock is granite, shows the effects of remote volcanic disturbances, and abounds in igneous rock and lava. The formation of the White Pine District is an anomaly, and it sets at defiance all known laws and rules of geology. To begin with Treasure Hill: starting up the steep acclivity above Hamilton, towards the bench on the summit, on which Chloride Flat is located, you come first upon deposits of silver ore at the Virginia Mine, some four or five hundred feet higher than the town. There is no outcropping ledge visible here, but numerous masses of rich ore were found at the surface, and following these down the country rock has been found.

Still ascending towards the summit, you come upon a singular outcrop of dolomite, or coarse, brown sugar-colored limestone. This ledge, if such it may be termed, runs along the hill in nearly a northerly and southerly direction for some two miles, but is most sharply and clearly defined for about a mile. The hill slopes rapidly from the summit towards the westward, and on the eastward has a sharp, precipitous side, the limestone having been broken squarely off, exposing layer upon layer from one foot to ten feet in thickness, and in some places uncovered for two hundred feet perpendicularly. The dolomite, or limestone, here dips toward the west at an angle of twenty degrees on the average, though more acutely at some points. It is along the edge of this precipitous face of the hill, between the layers of limestone, that the great deposits of silver now being worked are found. The ground above the ledge of limestone abounds with detached fragments of lime-rock, filled with marine fossils, among which the ammonite, spirifer, corals and seaweed are most abundant. In some places there is a layer of coarse, calcareous slate, like red earthen tiles, under the top dirt, and the deposits of silver lie between this and the limestone, while in others the limestone both overlies and underlies the silver deposits, and in places there appears to have been an upheaval or cross action, which has displaced both and jumbled together the country rock and metalliferous deposits in apparently inextricable confusion, making it impossible to judge at this stage of development whether the deposits run in a horizontal or perpendicular

direction. The float-rock was found at the bottom of the hill, on the eastern side, and the outcroppings of metal are all near the top. In following these deposits, the miners all work westward, descending somewhat more abruptly than the outward slope of the hill. Under the metalliferous deposits more fossiliferous limestone is found; and it is believed by many that the silver deposits will be found sandwiched in between each of the successive layers of dolomite, as the hill is cut down, like jelly in a Washington cake. East of Treasure Hill, across a valley a few hundred yards in width, is a range of lower irregular hills, the western frontage of which presents exactly the same appearance as the eastern face of Treasure Hill, the limestone outcropping in the same manner, and appearing to have been broken off from it and thrown over to the eastward by volcanic action; but, notwithstanding that the formation appears to have originally been identical, and that the only difference now is that one dips to the westward and the other to the eastward, it is a singular fact that while Treasure Hill, which dips westward, is full of deposits of silver of incredible richness, the corresponding hills on the eastward do not contain, so far as is yet known, a single pound of metal of any kind. On the western slope of Treasure Hill, immediately adjoining the town of that name, is Chloride Flat, where hundreds of shafts have been sunk through the limestone to a depth of ten to thirty feet, and deposits of horn silver and chlorides of great value are found to underlie the whole ground, few shafts missing the precious metal entirely.

The silver is found along this crest of the hill in vast irregular deposits, in the form of chlorides, bromides, sulphides and ruby and horn silver, not a trace of the ordinary sulphurets being found, and no base metal, to interfere with the immediate working of the silver, making its appearance. In some places the silver takes the form of "stephanite" and "stetfeldtite," the latter being peculiar to the mines of Eastern Nevada. No gold is found, and the ore is wonderfully tractable. The formation of this part of the district is unlike that of any other yet known on the continent; but we were told, by parties who professed to know, that the mineral deposits are similar in character, though far exceeding in extent and riches,

those of the famous German mines of the Hartz Mountains and those of Potosi, in Peru, which have been worked for centuries and are not yet exhausted. We should here mention that the ore at this point is mixed with black and white calc-spar, red quartzite and quartz, but no defined quartz ledges, or fissure veins, like that of the Comstock, have been discovered thus far. What may be found deeper in the hill remains to be seen.

Descending the hill towards the westward, occasional deposits of rich ore are found cropping out, but not in large quantities as yet. Crossing the cañon which divides Treasure Hill from the Base Range, and passing over to the cañon between the Base Range and White Pine Mountain proper, a line of deposits of silver, and other metals in combination, is found extending north and south on both sides of the ravine for two or three miles. These are situated at a depth of from 1,000 to 1,500 feet below the Treasure Hill deposits; and, though the mines have been but recently located, and are as yet little prospected, the indications of richness and permanency are very flattering indeed. There is a great variety of ores here, some of which are doubtless very refractory, and only to be reduced by smelting. There is copper-silver glance, argentiferous galena, carbonate of lead and silver, antimonial silver, and numerous other combinations more or less well defined. The country rock here is limestone, as on Treasure Hill, and the deposits, though extensive, appear to lie horizontally, or more nearly so than perpendicularly.

The origin of the silver deposits is a matter of conjecture purely. If, as is generally supposed, the silver originated deep down in the bowels of Mother Earth, and has been forced outward and upward by volcanic action, then it would seem reasonable to suppose that the lode, seam or fissure through which it came may be discovered by carefully following down the ore between the limestone layers, and the mines may prove inexhaustible; but there are other theories which materially conflict with this, and may prove correct. The fossils above and below the silver indicate that the hills have been thrown up from the bed of what was once a sea, and the limestone breaking sharply, as ice is broken on a river when the spring flood lifts it on its bosom, the silver between the

layers was exposed to the atmosphere. The salt left by the receding sea acting on the silver thus exposed has formed the peculiar combination known as chloride of silver. As the deposits are followed into the hill to a greater depth, the chlorides will—if this theory is correct—gradually give place to other combinations, and metallic silver in some form may ultimately predominate. This is the theory adopted by Rev. A. F. White, the Mineralogist of the State of Nevada, whom the writer met at the mines, and it would seem to be sustained by the developments thus far made in Treasure Hill. If it is correct, then the deposits will be found to vary only from a horizontal position by just so much as they have been heaved out of place by volcanic action, and true fissure veins or ledges may never be discovered in the district. Time only can tell which is correct.

THE TOWNS.

Hamilton, the town which has grown up in the cañon at the entrance of the hills on the north, contains perhaps 600 inhabitants. From thence a graded road winds up the hill to Treasure City, which stands below the crest of Treasure Hill, within the line of rich mines named on the east and Chloride Flat on the west. Here the principal mining population is congregated, the inhabitants, regular and transitory, numbering from 800 to 1,000. The distance from Hamilton to Treasure City is not over one and one-half miles in a direct line, though two and one-half by the toll road, and the difference in altitude is estimated at from 1,000 to 1,200 feet. The town of Silver Springs, sometimes called Shermantown, is located at the southern end of the Base Metal Range, two miles southwest of Treasure Hill, the road winding down a deep cañon to reach it. It is probably 1,500 feet lower than the town of Treasure City, or 7,500 feet above the level of the sea, and contains 400 or 500 people. Hamilton has a supply of water, and is the stage and express depot, and the primary depot for supplies for the district. Treasure Hill is exposed to the full sweep of the winds on the summit of the mountain, and has no water save what is hauled up there from Hamilton or Silver Springs and sold at eight cents per gallon; but is in the heart of the mineral deposits, and must be an important place, despite its unpleasant location.

Silver Springs is sheltered from the winds, and is the more desirable—or rather, endurable—place of residence. Hamilton was first called Cave City, from a number of caves below the town, in which the people first found shelter. It consists of board and cloth shanties, tents, and brush, rock and earth cabins. Treasure Hill, do., do. Silver Springs has two or three good brick buildings, and is generally better built than either of the others. There is a saw mill, quartz mill, brick yard (not now in operation) and large slaughter-house at Hamilton; two banks and several assay offices at Treasure Hill; and a quartz mill, smelting furnace, assay office and saw mill at Silver Springs. The entire population of the district may be put down at 2,500 or 3,000 at this time, and increasing at the rate of fifty per day. A very few women have found their way into the district, but as yet there can hardly be said to be anything like female society there. The principal occupation of the inhabitants is mining; and their amusements are hunting for mines, writing home to their friends, and talking of the almost incredible developments on the hill. Every man you come across has a number of rich specimens, worth perhaps hundreds of dollars, in the aggregate; and, strangely enough, for a new mining district, nobody appears to want to sell or dispose of a mine; the man who collars you as soon as you arrive in town, informing you that he has the biggest thing in the mountains, and only wants "capital" to help to develop it, has not yet reached White Pine. There are quite a number of whisky-bloated bummers in the different camps, living, heaven knows how, but none idle from necessity. The wages paid in the mines are $5 per day, coin, and those not at work for themselves get employment easily at something, if so disposed. Lots which sold at $25 in Hamilton and Treasure Hill two or three months since are now in many cases worth $600 to $1,200, and "jumping" is as lively as in San Francisco, though attended as yet by no bloodshed. Nearly every building spot along the road, from Hamilton up to and through Treasure Hill and down to Silver Springs, is already claimed by somebody, and holders always ask an advance on yesterday's prices.

THE MINES OF TREASURE HILL.

The mines from which nine-tenths of the treasure now

being produced in the White Pine District is being taken are located, as we have said, along the broken edge of the dolomite formation, in a line running southward from the town of Hamilton up to the summit of Treasure Hill, and thence in the same direction over the declivity on the other side. The length of this lode or line of deposits is, so far as is known, between two and three miles —say about that of the Comstock; the Virginia at the northern end answering, for the purpose of illustration, for the Ophir and Gould & Curry, and the Aurora, Keystone and Eberhardt, near the south, for the Crown Point, Kentuck and Yellow Jacket. The principal claims thus far opened along this line of deposits are located in succession as follows, commencing at the northern end: Virginia, Mammoth, Ellersly, north of the crest of Treasure Hill; Hidden Treasure, near the summit; South Extension of Hidden Treasure, North Aurora, South Aurora, Keystone and Eberhardt. There are numerous other locations along this line, or nearly parallel with it on the west; but these are the principal claims opened. There is an apparent break in the line of deposits, as evinced by the croppings at the crest of the hill, south of the Hidden Treasure and north of the Aurora; but from that point south the deposits crop out so near together that they may practically be said to be continuous.

The mines examined in detail by the writer were as follows:

THE VIRGINIA,

Located at the northern end of the Treasure Hill belt, or line of deposits, half a mile south of Hamilton, and 500 feet higher. This claim is situated on the eastern side of a ravine near the top of a ridge, running north and south. It includes 600 feet north and south, and 200 feet in width from east to west. It has been but partially opened, but the ore crops out nearly its whole length, at points from 40 to 60 feet apart, east and west; and, at a depth of 20 feet, solid rock, with a large, well-defined pay streak of *bonanza*, has been exposed. On the top of the ridge, above the Virginia shaft, a claim was located, and called the Aladdin's Lamp. This claim ran directly across the Virginia, and though the prior claim exhibited no evidence of a ledge, excavations on the Aladdin Lamp ground, however, disclosed rich ore in de-

tached masses, and the whole hill appears to be full of it. The Virginia ore, though not so exceedingly rich as that of the Eberhardt and Keystone, which is so near pure silver as to be hardly describable as ore, runs from $100 to $2,000 per ton, the average being probably not under $225. Sixteen tons recently crushed and worked yielded $226 net per ton. The conflicting titles have been compromised this month, and the mine purchased by Mark L. McDonald, William H. Sharp and L. F. Loveland, of San Francisco, at a round price. The writer heard $80,000 offered for the mine as it stands, and $36,000 for a six months' lease of it, both offers being refused by the present owners. About twenty-five tons of average rock was piled up by the shaft a week since, and twenty men were just being set at work to take out more. It is the intention of the owners to push work vigorously all winter, if possible.

HIDDEN TREASURE.

This mine was discovered by an Indian, who guided white men to it, September 14th, 1867. There was considerable shenannigan going on for a time, but the facts, which were attempted to be suppressed, soon leaked out, and the result led to the discovery of the great Keystone and Eberhardt deposits, lower down the hill, on the south, and the sudden development of the whole district. The present owners are T. J. Murphy and J. B. Marchand. It includes 600 feet. The line of deposits has been stripped for nearly the entire length of the claim, and in places to a depth of twenty feet. The lode– if such it may be called—pitches westward at an angle of twenty degrees, and its thickness has not yet been clearly determined. Three hundred tons of the ore, no rich specimens included, hauled to the Monte Cristo Mill, on the west side of White Pine Mountain, sixteen miles by the road *via* Hamilton, yielded $160 per ton. The cost of reducing it was $65 per ton. Next year it will cost not over $20 per ton to reduce the same ore. The owners now have one hundred tons of ore of superior quality out ready for crushing, and the lode is increasing in richness. The mine is entirely uncovered, and no work will be done on it after the heavy snows fall, until next spring. Picked specimens show horn silver in abundance, worth $1,000 per ton and upwards.

AURORA MINE.

This mine is located on the south of the crest of Treasure Hill, the Hidden Treasure being on the north, and just east of the town of Treasure Hill. This is properly the South Aurora, the North Aurora being above it, nearer the summit of the hill, and but little developed. Captain Frank Drake owned one-half of this claim of 800 feet, and A. W. Stowe and Joseph Stowe the other half. Work was commenced on it with two men, September 22d, 1868. Thirty men are now worked, and a week ago there were seventy-five tons of rich ore on the dump. One hundred and fifty tons of rock from this mine, worked at the Newark Mill, in the Diamond Range, ninety miles to the northwest of Hamilton, yielded an average of $185 per ton, the highest being $202, and the lowest $155. The cost of hauling was $20 per ton, and of working $35. There is more quartz here than lower down the hill on the other side, and the indications of a regularly defined ledge, being found at no great depth, are better than elsewhere. The shaft is twenty feet deep, and the drift westward sixty feet. The entrance to the mine is roofed over, and work can be carried on all winter. This mine was sold last week to A. P. Stanford, and others of this city, for, as is understood, $125,000 in coin. It is generally considered an immense fortune to the purchasers at the price.

THE KEYSTONE.

Descending the hill southward past a number of claims, which we have not time to examine critically, we come upon the Keystone, which is situated some distance below the edge of the dolomite croppings, on the eastern face of the hill. Here the chloride deposit crops out in almost incredible richness, and the developments are astonishing. The claim covers 800 feet, and the deposit was discovered by a party following float ore up the hill from the ravine below. At the point where the shaft now is, one of the party, a mere lad, named John Turner, struck a pick into what seemed to be a mass of dried putty. This proved to be pure chloride of silver, worth $15,000 to $25,000 per ton, and under it was found more of the same sort, and masses of almost pure metallic silver. The own-

ers of the claim are Dr. E. X. Willard and his adopted son John Turner, and Edward Applegarth, the latter holding one-half and the two former one-quarter each. The original location was mixed up with that of the Eberhardt, but a compromise has been effected; a neutral line, beyond which neither is to pass, has been agreed on, and on the 1st of August next the two claims are to be consolidated. At present each Company works its own ground. The amount already taken out of the Keystone is not stated by the owners, but it is very large, and all came out of an ugly opening in the hill not more than fifty feet long horizontally and twenty feet deep. A shaft has been sunk sixty feet through successive layers of dolomite at the entrance of this open cut, and rich ore found at the bottom. Much of the wealth of this mine consists of dull yellowish-brown colored dust, which is run through screens to free it from rock, and placed in bags. This is clear chloride of silver. Place a little of it on an anvil and strike it with a hammer, and it will become solid metallic silver at once. "The cheese," when silver is being coined at the United States Mint, is composed of the same substance, art having brought the metal to the same point that nature has reached unaided in White Pine. One piece of this chloride, shown us by Dr. Willard while at the mine, weighed 143 pounds, and was worth, as it lay on the ground, over $1,500 in coin. In one pile we saw 100 tons of ore which will work $300 per ton; in another, 150 tons which will yield $300 to $500 per ton; in another, 600 tons which will yield $100 and upwards; in another, a large pile of chloride dust in bags, worth—we hesitate to say how much. Two lots of the ore from this mine, worked at the Newark Mill and the Manhattan Mill, at Austin, yielded an average of $1,000 per ton, or $100,000 in the aggregate. Dr. Willard opened a bag of specimens of exceeding richness, and, assuring us that he was happy to be able to have such rock to give away, presented us with so much of the precious metal that we almost felt ashamed to accept it. The deposit shows no signs of giving out at the west end of the open shaft, and the estimated value of the mine is so great that we do not think it wise to state it.

THE EBERHARDT.

Next south, and adjoining the Keystone, is the most celebrated mine of all—the Eberhardt. So rich is this mine that its name has become almost synonymous with that of the cave entered by Aladdin. The location was made in December, 1867, and covers eight hundred feet, north and south. The present owners are Capt. Frank Drake, E. R. Sproule, Lavern Barris, J. W. Crawford, and Edward Applegate. At a depth of twenty or thirty feet from the surface drifts have been run in several directions through solid masses of chlorides, bromides, sulphides, and ruby and horn silver, for 20 to 50 feet, and the end is not yet reached. The entrance of the tunnel has been closed, and admission to the mine can now only be gained by descending the vertical shaft in the Company's building. Mr. Crawford, to whom we bore letters of introduction, took us, from the office in Treasure Hill to the mine, in his carriage, in company with M. Upton, of the First National Bank of Nevada; Joseph Gordon, of the banking house of John A. Paxon; A. F. White, the geologist, and others, who volunteered to show us the wonders of the place.

Descending the shaft on a rope, we found ourselves among men engaged in breaking down silver by the ton. The light of our candles disclosed great black sparkling masses of silver on every side. The walls were silver, the roof over our heads silver, the very dust which filled our lungs and covered our boots and clothing with a gray coating was fine silver. We are told that in this chamber a million dollars' worth of silver lies exposed to the eye, and our observation confirms the statement. How much may be back of it Heaven only knows. Astounded, bewildered and confounded, we picked up a handful of the precious metal and returned to the light of day. But for the bars of solid silver since shown us, we should be inclined to doubt the evidence of our senses, and look upon the whole scene in the chambers of the Eberhardt mine as the work of a disordered fancy, the baseless fabric of a vision. We had seen enough of the mines on this wonderful lode or line of deposits, and did not care to go on lower down the hill to examine the Silver Glance and other less noted mines.

From the Eberhardt mine we rode down the long

cañon to Silver Springs, and entered the Oasis Mill, owned and run by the Eberhardt Company. This is the old Keystone Mill, which was burned at Austin last summer. General Page, after settling with the underwriters, took the machinery to this place and rebuilt it. It has ten stamps, eight Varney pans, and three settlers. No roasting, chlorination or other expensive process is required, and the silver is all saved by the simplest amalgamating process. The Superintendent, John Collyer, showed us through the mill, and allowed us to examine the whole establishment. In the ore-shed we found 200 tons of Eberhardt second-class rock—the first-class is so pure that it will not crush, and is selected and laid aside to be melted down—and long trains of pack mules were arriving with more as fast as possible. The Company will lay in as large a store of ore as possible before the snows fall heavily, in order to continue work all winter. One hundred and fifty tons of this second-class ore, worked at the Newark mine, yielded $1,300 per ton, and it is supposed what is now being placed in the storehouse will yield as well.

When General Page put up this mill at this point, he had a contract to work the ores of the Eberhardt at $80 per ton until next spring. The proprietors found he had a fortune in the contract, and bought the mill, which cost him $30,000, for $75,000. It has now run thirty-two days without stopping, and is rolling out the solid bullion daily. The refining and assaying for the mill is done at the office of T. M. Luther, in Silver Springs, and from his books we take the following figures: The mill started October 15th, and stopped to clean up on the 16th of November. Of this time, nine days' running was on Eberhardt rock, and from which the yield was $34,500; the average yield being $800 per ton.

The mill was idle for four days (Sundays), and running the remainder of the time on low-grade custom-rock, mostly from the Stonewall and other mines on Chloride Flat. The total yield to November 1st was $60,919; and from November 1st to 16th, $82,500. Mr. Luther showed us twenty bars of bullion, worth $1,500 each, or $30,000 in the aggregate. He also showed us a bar worth $35 12, melted from four pounds (troy) of Eberhardt rock—not clear chlorides—and another worth

$115, which was melted from twenty pounds of rock which a visitor collected as specimens and carried down the hill in his pockets.

From a chimney in the Eberhardt ground, $85,000 worth of silver was taken in a few days, and the party taking it out then compromised with the Company, being allowed to hold all he had taken out and release to the Eberhardt Company the ground in dispute. This silver is now piled up in a cabin at Treasure Hill. The proprietors have $50,000 worth of similar specimens piled up in another place. One of the owners of the Eberhardt, but recently a poor man, values his interest at $1,000,000, and we presume each of the others would refuse to sell for less money.

Near the Oasis Mill is a large cupola smelting furnace, nearly ready for running, erected by John Huber, assisted by Mr. Derides. This furnace is calculated to melt ten to twelve tons per day, and will work the ore from the Base Range, near by, of which there is abundance.

CHLORIDE FLAT.

Returning to Treasure Hill, we examined the mines on Chloride Flat. This Flat, as it is called, is a slope comprising from five to ten acres on the western side of the hill, adjoining the town of Treasure Hill. It is perforated, like a sieve, with shafts, sunk often within from ten to thirty feet of each other. The holders claim 400, 600, or 1,000 feet each, and the claims, being located on the old ledge theory, run into each other, cross, and interlace in every direction. At present the lucky holders of claims in which metal has been struck are too busy getting out rich horn silver, and other forms of the metal, to quarrel with each other; but as soon as they work out the horizontal deposits, and run into each others' claims, as they soon will, shooting and lawsuits will be the order of the day in what is now a peaceful and highly prosperous community. The great mistake of organizing the district on the perpendicular ledge theory, each claimant being allowed two hundred feet on the ledge, "with all its dips, spurs and angles," and the discoverer two hundred feet in addition—was made at the outset, and it is now too late to remedy it. Had the locations been made by the square yard, it would have been all right, and many a lawsuit and shooting affray

saved. Already difficulties are arising in this vicinity, and many more must follow. From ten to thirty feet through the limestone brings the prospector on Chloride Flat to his deposit of silver, or to the certainty that he has missed it and must seek elsewhere. The owners of the Robert Emmet Mine, on Chloride Flat, who are taking out rich horn silver, reject as base rock, unworthy of being worked, all yielding less than $50 per ton. This deposit was seven feet thick when we saw it, and not yet worked through. The Genessee, Stonewall, Delmonico, and other mines in the vicinity, are among the richest on the Flat. There are 1,500 locations recorded in this District, and of this number 500 at least are within rifle-shot of the above named mines. Our report is too long already, and we must pass to other topics.

THE CLIMATE—NECESSARY OUTFIT.

Treasure Hill is from 8,000 to 9,000 feet above the level of the sea, and exposed to the full sweep of the winter winds, which are fearfully severe at times between the Rocky Mountains and Sierra Nevada. Spring is late, cold and wet; summer short, dry, and tolerably pleasant; autumn, long and pleasant, with fine days, and cold, frosty, freezing nights. It is reported that snow falls to a depth of fifteen feet on the White Pine range in winter; but this story is not well authenticated, and the vegetation and general appearance of the country would lead to the belief that the annual fall is not extremely large. Up to the 20th instant there were but a few inches of snow on the highest peak of White Pine Mountain, and only an inch or two, in scattered patches, on Treasure Hill and the Base Range. It was snowing on the 20th and 21st, on the Toiyabe and other ranges south and southeast of Austin, and probably also at White Pine, but the storm did not appear to be of long duration. The winter, however, must be intensely cold, and those who propose to remain there until spring must be well provided with good heavy woollen underclothing, heavy pilot, beaver or blanket cloth outerclothing, and at least two pairs of the heaviest and best San Francisco or Oregon blankets—the best are the cheapest in the end, and will always find ready sale.

It is difficult to get goods over the railroad at this time promptly, owing to the pressure of material for extending

the line, which must go forward whether or no; but parties intending wintering in the mines must either take over a stock of provisions, and have them hauled from Argenta, or go provided with means to purchase them at Hamilton day by day for four or five months, probably at an advance on the prices quoted by us as the present ruling rates. The climate appears to be exceedingly healthy, but, owing to the great elevation of the country, and consequent rarefication of the atmosphere, we would advise no person with weak lungs to winter there. Colds, rheumatism and fevers will doubtless prevail to some extent before spring, as the result of exposure, neglect and carelessness.

PRESENT COST OF LIVING.

At present the necessaries of life in the White Pine country are pretty high-priced, but of good quality and abundant. At Hamilton and Treasure Hill are quite a number of restaurants at which a tolerably square meal may be obtained. The price per meal is $1, and board by the week is $12. There is no hotel in the district, and but one or two places where a bunk to sleep in can be rented. The price of a single bunk bed, with a mattrass and blankets, at the store of Wakefield & Wheeler, (in which Wells, Fargo & Co.'s office is kept in Hamilton,) is $1 per night. This is the general resort of all new comers, and a man who is in season to be booked for a bunk is looked upon as a favored mortal. Others, less fortunate, sleep on their blankets on the floor of the store, in saloons, restaurants, tents, hovels, or in the open air, as they can catch it. The prices of various articles of food for man and beast are as follows: Flour, $16 per hundred pounds; potatoes (grown in Nevada and of superior quality), 12½ cents per pound; onions, 15 cents per pound; sugar, brown, 3½ pounds for $1; ditto, crushed, 3 pounds for $1; coffee, ground, 75 cents per pound—no facilities for grinding in the district; bacon, sides, 37½ cents; hams, 37½ to 40 cents; shoulders, 35 cents per pound; beef, fresh and of good quality, 25 cents; pork, do., do., 37½ to 50 cents per pound; eggs, from Salt Lake—so-soish—$1 and $1 25 per dozen; do., fresh, $2 per dozen; tea, $1 25 per pound; candles, 35 cents per pound; barley, 10 to 12½ cents per pound; hay, $150 per ton; drinks, 25 cents each, and no credit at

the bar. Wood of good quality is abundant, and can be had for the cost of cutting and hauling. All the woodland in the vicinity is being claimed by parties who propose to cut wood for the mills and to supply the miners. Lumber costs $150 per 1,000 feet in ordinary, and $175 per 1,000 feet for choice, at Hamilton, where there is a little steam saw-mill with a single circular saw constantly engaged in cutting lumber from the "bull pine," (or "nigger pine," as it would be termed in the South), which grows on the White Pine Mountain proper, in considerable quantities, and of sufficient size to afford saw-logs twenty or twenty-five feet in length and two feet thick. At Treasure Hill, $200 and upwards per 1,000 feet is charged for boards, which are hauled from Hamilton or Silver Springs, or from remote districts, by heavy teams. Half a dozen men clubbing together could in a few days put up a shanty of cedar posts chinked with stones and mud, and roofed with cedar boughs and earth, which would afford comparatively comfortable quarters for the party through the winter. Those erecting buildings of sawed lumber at present line them with cotton cloth to exclude the wind, then shingle or tin the roofs. A horse will "eat his head off" in a week or two, and parties coming into the district at this time will do well to send them off to the lower valleys, twenty to fifty miles away, where they can winter on bunch grass and white sage in the open air, only requiring the attention of a herder. Clothing and blankets cost about fifty per cent. more than in San Francisco.

THE FUTURE OF WHITE PINE.

Will the deposits prove merely superficial, and soon work out, or will they lead to the discovery of permanent ledges? is asked daily. *Quien sabe!* It is certain that the deposits already uncovered cannot be worked out in a year, and meantime, at the very least, $5,000,000 or $10,000,000 of bullion will have been produced and shipped to San Francisco. All through the White Pine district new discoveries, of greater or less importance, are being made daily; and at Duckwater, forty miles southeast; at the new Grant District, sixty-five miles south; at Eureka, 40 miles west—all around, in fact, new discoveries are being made. Stretching from the northern line of Idaho to the Nevada line on the south is a broad belt of metalliferous country as

yet but partially explored or wholly untouched. All this will be hunted over next year by prospectors, stimulated by the White Pine discoveries. To our friends we say: Go slow; buy or locate for what you can see in this district, and instead of expending vast sums in running costly tunnels to strike imaginary lodes at great depth, adopt the Mexican rule—where you see ore, go for it; or gopher it, if you prefer that form of expression. There is wood in this locality enough to last for years to come; for the present the mines are rich beyond calculation, and for the rest, let to-morrow take care of itself: "Sufficient unto the day is the evil thereof." The White Pine Mill Company (Miller, Taylor & Co.) have just got their ten-stamp mill running; another of five stamps will be running soon, and next summer there will be no lack of facilities for reducing ore at low rates. White Pine is "a big thing on ice," literally, already, and it is not worth our while to speculate much as to the future; the present is almost fabulous, and we need not draw on our imagination.

WHITE PINE AS SEEN FEBRUARY 1, 1869.

From the Alta of February 8th.

In November, 1868, the writer visited the White Pine Mining District when but little known to the world at large, and placed before the readers of the ALTA the result of his observations on its geological formation, geography, topography and general character. What he then said of the value of the district has been more than verified since, and he has nothing whatever to take back on that score. The general description then given will answer as well at present as at that time, being, in all essential particulars, correct; but great developments and new discoveries of immense importance have since been made, and during the past three weeks we have gathered, from personal observation on a second visit to the locality, many facts which, in the present excited state of the public mind, will be of interest and value to our readers. These we now propose to give as briefly as compatible with the magnttude of the subject.

LOCATION, WAY AND COST OF REACHING THE DISTRICT.

The White Pine Mining District is situated, as nearly as may be stated, in latitude 39° 15′ north, and longitude 38° 30′ west (from Washington), on the southern border of Lander County, Nevada, about 60 miles west of the Utah line, nearly due south of Elko Station on the Central Pacific Railroad, and 110 miles, by the stage road, from that place. The old route, *via* Argenta and Austin, has been abandoned, and

passengers and freight now go by the direct route, *via* Elko. The distances from San Francisco are as follows: To Sacramento, by railroad or steamer, 90 or 125 miles; thence to Elko, by rail, 460 miles; thence to Hamilton, by stage, 110 miles—say 660 to 695 miles. Fare to Sacramento, $2 or $4; thence to Elko, by rail, $46; thence to Hamilton, by stage, $40—total, $90, in coin. Meals or lunches, after crossing the Sierra Nevada, are $1 every time, so that the total expense of the trip, if no extra baggage (that is, none over 25 pounds) is taken, the cost of the trip from San Francisco to Hamilton, or *vice versa*, will be about $105 or $110. Leaving San Francisco at 3 or 4 P. M., you remain in Sacramento over night, leave Sacramento at 6 A. M., reach Elko 48 hours after leaving San Francisco, remain over night at Elko, and, leaving by stage at 8 A. M., reach Hamilton at 10 or 11 A. M. next day—four days out from the Bay City. The regular daily stage line from Elko to Hamilton is owned and run by Wines & Shaw. Their coaches, though necessarily overcrowded with passengers and mail and express matter, in the present excitement, make regular time. Wells, Fargo & Co. are, it is said, about to put on a line of their own; and there are a number of individual proprietors who run stage coaches over the route, driving through the entire distance with one team, or with but one change of teams, in from two and a half to four days, lying over at the wayside stations at night, and charging $30 fare for the trip. The trip at this season, when the ground is covered for most of the distance with snow, and the nights and many of the days fearfully cold, is tedious enough at best, and the quickest line is always cheapest. A complete outfit of the warmest and heaviest clothing and blankets should be taken from San Francisco, though they can be obtained, at an advance, at Elko. The stage road from Elko to Hamilton is mainly through an open valley country, with an easy, ascending grade—a good road for freighting.

THE TOWNS.

Hamilton, at the entrance of the district on the north, at the foot of Treasure Hill, 7,500 feet above the level of the sea, now contains about 150 houses, tents

and huts, every conceivable material—rough lumber, planed lumber, slabs, pine logs, cedar posts, cotton cloth, woolen blankets, willows, tin, raw hides, hay, mud and stones—entering into the composition of the various tenements into which 1,500 human beings and any number of horses, mules, Indians, dogs, and whiskey-bloated, blear eyed bummers are nightly crowded. Great improvement in the buildings has been made within the last sixty days, and greater still would have been made, in spite of the bitter weather, if lumber, which is from two hundred to three hundred and fifty dollars per thousand, could be obtained fast enough to supply the demand. Lumber from the Sierra Nevada has been selling at four hundred dollars per thousand feet until within a few days, when it dropped to three hundred and fifty dollars, and every stick which can be sawed by the little steam mill at Hamilton, that at Silver Springs, and one or two others further out, is eagerly snatched up, as fast as cut off, at two hundred to three hundred dollars. Real estate —possessory title—has advanced at a tremendous rate; lots which sold for twenty-five dollars four or five months since now selling at one thousand dollars to ten thousand dollars. Mr. Walton, an old and esteemed resident of San Francisco, has laid off an addition to the town on the southeast side, and is likely to realize a large fortune from it, as it comprises many desirable building lots, and some of the best mill-sites in the district, or will do so when Von Schmidt's Water Works are in operation; of which, more anon.

Treasure City, two miles southwards from Hamilton, on the top of Treasure Hill, 9,100 feet above the sea level, and 1,500 or 1,600 above Hamilton, right up in the frozen clouds, exposed to the full sweep of the terrible winter storms, in the midst of the richest mines on earth, is about as large a town, and is growing as fast as materials can be obtained for building.

Silver Springs, sheltered in the deep cañon at the southwestern point of Treasure Hill, 7,000 feet above the sea, is better built than either of the other towns, and the temperature of the atmosphere being many degrees higher than in Hamilton or Treasure City, is

destined to be the residence of all the citizens of the district, whose business and means will permit. People can work there in the open air when they cannot face the blasts for an hour at either of the other places. It is now mainly built from lumber cut in the vicinity, and has a number of tolerably substantial houses. It contains, at present, a smaller population than either of the other places. Real estate is advancing here as at Hamilton and Treasure City. Points common to all these places will be mentioned hereafter. There are now from four thousand to five thousand people at least in the district, within an area of four or five miles square, and unless the bitter cold and snow, sickness, destitution and death, turn back the crowd of crazy and often penniless adventurers now hurrying thitherward, the population will be doubled before the first of April. Before August 1st, there will be from twenty to fifty thousand people in the White Pine District and immediate vicinity.

MINING CLAIMS AND MINING LAWS OF WHITE PINE DISTRICT.

On the first day of February, 1869, there had been entered on the records of the White Pine Mining District upwards of twenty-two hundred (2,200) mining claims, of which four-fifths were located within a circle two miles in diameter, the centre of which would be on Chloride Flat, adjoining the town of Treasure City. These claims, with some half-dozen exceptions, were all made on the "ledge plan," that is to say, on the assumption that each claim is on a distinct ledge or vein, and the locators generally claim 200 feet along the vein by 200 feet in width for each name included in the certificate of location, with an extra 200 feet for the discovery claim, adding: "We claim the same with all its dips, spurs, angles and variations." A large majority of these claims are located on the four "flats" or slightly inclined table-lands ranging along the western side of Treasure Hill near its summit, from south to north, in the following order: Glacier Flat, Pogonip Flat, Chloride Flat and Alta Flat. The metalliferous deposits in these flats are found in a horizontal position, or nearly so—the inclination being generally from 20 to 30 degrees towards the west—underlying at a depth of 10 to 30 feet the first, second

and third layers or strata of coarse limestone or dolomite, which is the country rock of the district. These claims, located as separate ledges, run into and across each other in every direction, and in the most inextricable confusion; the crop of fights and ruinous lawsuits which will result from this confusion will yield a rich harvest for the legal fraternity, and beggar many a man now holding really rich and valuable claims. Quite recently "square locations" have been made on Pogonip, Chloride and Alta Flats; and it is the opinion of able lawyers that notwithstanding such locations are not expressly provided for by the mining laws of the district, they are not in any manner prohibited by them, and will hold good if properly worked. Had the square locations been adopted as the rule from the start, it would have been infinitely better for the interests of the really "honest miners" of the district. Owing to ignorance of the laws of the district, on the part of the locators, not one-half of the claims recorded are in the proper form and terms, and from like causes and lack of means or inclination half of the rest—including few of any value, however—have not been worked according to those laws, and are therefore now jumpable.

The laws of the White Pine Mining District are comprised in the records of two meetings of miners, held when the present White Pine, or Treasure Hill mines, were as yet undiscovered, and the now comparatively neglected mines on the Western slope of White Pine Mountain comprised all that was known of the district. We give the subjoined transcript of these records as they now stand:

TUESDAY, October 10th, 1865.

A company of miners met on the above day for the purpose of forming a district. The meeting was called to order, and Robert Morrell was nominated to act as President.

Motion made and carried that this district be known as White Pine District—bounded on the north by the Red Hills, and running from thence south to a point where the mountain runs into a foothill; from thence east, 12 miles *from thence;* from thence north, and

from thence west, to the place of beginning; the district being twelve miles square.

Thomas J. Murphy was nominated to act as Recorder for the district, and was duly elected Recorder of White Pine District for a term of twenty-four months from date.

On motion, the following By-Laws were presented and approved:

First—The Recorder shall go on the ground and record all claims, for which he will be allowed one dollar per name, after which no mine can be relocated, but belongs forever to the parties whose names are recorded. [Amended.]

Second—There shall be an election for a new Recorder on the 10th of October of every second year, who shall be in office as Recorder for two years, unless by death removed, or by other reasons, when a notice signed by fifty of the miners of the district can call a meeting, published by a notice posted 30 days in the district, and advertised for 30 consecutive days in the Reese River papers. [Amended.]

Third—It shall be the duty of the Recorder to keep a suitable set of books, or a book, a full and truthful record of the proceedings of all public meetings; to place on record all claims put on notice or brought to him for record, when such claims shall not interfere with or affect the rights or interests of prior locators, recording the same in order of their date. It shall be the duty of the Recorder to keep his books open at all times to the inspection of the public. He shall also have the power to appoint a deputy to act in his stead. It shall be the duty of the Recorder to deliver to his successors in office all books, records, papers, etc., belonging to or pertaining to his office.

Fourth—All examinations of the records must be made in the full presence of the Recorder or his deputy.

Fifth—Notice of a claim or location of mining ground by any individual, or by a Company, on file in the Recorder's office, shall be deemed equivalent to a record of the same.

Sixth—Each claimant shall be entitled to hold by location 200 feet on any lead in the district, with all the dips, spurs, angles, offshoots, outcrops, depths, with vari-

ations, and all the mineral and other valuables therein contained. The discoverer of, or locator of, a new lead being entitled to one claim extra for discovery.

Seventh—The locator of any lead, lode or ledge in the district shall be entitled to hold, on each side of his lead, lode or ledge located by him, or them, one hundred feet; but this shall not be construed to mean any distinct or parallel ledge within two hundred feet, other than the one originally located.

Eighth—All locations shall be made by a written notice posted upon the ground.

Ninth—Every claim located by individuals or company shall be recorded within 14 days after the date of location. [Amended.]

Tenth—The Recorder shall be allowed fifty cents per name for every name on an abstract of record furnished by him.

Eleventh—The Recorder or his deputy is not required to reside constantly in the district. [Amended.]

Twelfth—These laws cannot be amended, altered or repealed for two years.

Thirteenth—These laws shall take effect on and after the 10th day of October, 1865.

RECORDER'S OFFICE, MOHAWK CAÑON,
WHITE PINE MINING DIST.,
July 20th, 1867.

Pursuant to a call issued by the Recorder, the miners of White Pine Mining District met at the Recorder's office at Mohawk Cañon, on Saturday, July 20th, 1867, for the purpose of electing a Recorder and amending the By-Laws of said district.

On motion made and seconded, H. Woodson was chosen Chairman, and A. J. Leathers, Deputy Recorder, acted as Secretary.

The following amendments to the By-Laws were submitted and adopted:

First—The Recorder shall be allowed fifty cents per name for recording, instead of one dollar.

Second—When a claim is located, and the proper notice put on it, there shall be allowed ten days to file a notice for record, and thirty days additional time, within which the proper amount of work must be done on the ledge.

Third—All locations already recorded shall have two days work done on them for every location on or before the first day of February of each year, which work shall hold good until the 20th of July of the same year, and all locations made hereafter shall have the same amount of work done on them within forty days after locating them, which work shall hold good for one year from the date of the record of such work.

Fourth—Any location having the necessary amount of work done on it, as in the previous article, shall have the same surveyed and the work recorded by the Recorder, within ten days after said work is done, and the Recorder shall receive two dollars for his services to survey and record the same.

Fifth—Any claim upon which the necessary work is not done by the first of February shall be subject to re location.

Sixth—Any claim, having the necessary work done upon it within three months previous to the adoption of these by-laws, shall be considered as having done work to hold for one year from this date, the same being duly recorded as per Article Fourth.

Seventh—The Recorder shall have the privilege of absenting himself from the district, but shall have a deputy appointed to attend to his business during such absence; and in case of resignation, removal or death of the Recorder, the deputy shall immediately give ten days notice, by placing written notices at three conspicuous places in the district, that an election will be held for Recorder, stating time and place, when a majority of the miners present shall elect to fill the vacancy for the unexpired term; and until such officer be qualified the deputy shall act as Recorder.

Eighth—The Recorder shall, upon the written application of five miners, call a special meeting of the miners of the district, when it shall require a majority of the miners of the district to transact any business; but at the annual meeting on the 20th July of each year, a majority of the miners present shall have power to transact any business coming before the meeting.

Ninth—Work done upon any portion of a location shall be deemed as having been done for the benefit of the whole of said location, except in case as stated hereinafter.

Tenth—No person shall have the privilege of participating in any meeting except *bona fide* miners of the district; and no person shall be considered a miner unless he has a claim recorded and worked according to the by-laws.

Eleventh—In case where a portion of a Company refuse to do the necessary amount of work to hold their claim, after being notified by placing a written notice on the Recorder's office for twenty days, and the other portion of the Company wish to work enough to hold their part of said claim, they shall give notice in writing of their intention to the Recorder, and designate what part of the claim they wish to hold, and have the work recorded for that part of the claim, and the balance of said claim shall be subjected to relocation if the laws are not complied with.

Twelfth—The Recorder's term of office shall be one year, or until his successor is qualified.

Thirteenth—All previous by-laws, or parts of by-laws, conflicting with these by-laws, are hereby repealed.

I, L. P. Tenney, Mining Recorder in and for the White Pine Mining District, County of Lander, State of Nevada, do hereby certify that the foregoing is a full, true and correct copy of all the Mining Laws of the White Pine Mining District, as now appears of record in the books of said Mining District, in my office.

Treasure City, White Pine District, January 28th, A.D. 1869. L. P. TENNEY, Dist. Recorder.

It should be borne in mind that the actual, not merely constructive, possession is in this case emphatically nine points of the law. Don't forget that!

WILL THE MINES LAST?

When the writer visited the district in November, it was still an open question whether there was such a thing as a true fissure ledge to be found there; many—the writer among the number—inclining to the belief that *all* the mineral was in merely horizontal deposits of sedimentary origin, and their permanency a matter of great doubt. Candor compels a full and

unqualified admission of the falsity of such conclusion after a second and more minute examination made since the mines were more thoroughly opened, and recent and important developments have been made. That the silver mines of White Pine were rich beyond all precedent—almost beyond comprehension and belief—was admitted perforce at the first examination; the evidences of their permanency are now incontrovertible, while their extent and value are almost inconceivable—utterly beyond the bounds of cool and careful calculation. In writing on the subject we must either challenge disbelief on the part of those who have not seen them, or incur the charge of far understating the truth by those who are or have been on the ground. It would be a matter for astonishment, under the circumstances, if we fully satisfied either party; we don't expect to do it.

That there are well defined, genuine, metal-bearing, perpendicular fissure ledges in the White Pine District is no longer a matter of question; and that fact once positively established, as it now is, all doubt of these mines lasting for years under any system of working may be set at rest at once and for ever. Probably nine-tenths of all the claims located in the district are on horizontal deposits; but real fissure ledges have been found there, nevertheless.

The most perfectly defined wall rock which is to be seen in any mine visited by the writer is found at the California, on the southern slope of Treasure Hill, some 1,500 feet below its summit, and only about half a mile east of the town of Silver Springs. This mine has been but imperfectly opened, but enough has been done to show that the ledge is of great thickness, and that it runs down deep into the bowels of the earth. The open cut across the ledge shows ore in abundance in a concentrated vein, which is from eight to twelve feet in thickness at least—the northern, or foot wall, not having been reached as yet. The ore runs from $100 up into the thousands per ton, rich chlorides being found with the lower-grade conglomerate rock. The ledge runs nearly due east and west, and pitches out of or away from the hill southwards at an angle of say 15 or 20 degrees, the hanging wall of bastard slate

being as well defined as any to be found in any mine on the continent. Good $100 milling ore can apparently be found in unlimited quantity in this mine. The California is reported to have been bonded to A. P. Stanford for $50,000, and is looked upon as one of the most promising mines in the district.

Four hundred feet to the westward of the California shaft, or cut, the West California Company in sinking "blind"—that is to say, with no surface indications to guide them—have struck the California ledge at a depth of 35 to 40 feet, and, when the writer visited the localtty, were running a drift directly into the solid ore. The hanging wall is precisely the same as that in the original California, has exactly the same dip, runs in the same direction as straight as a line could be drawn, and encloses the same kind of ore. Still further westward a Company, sinking on what appears to be the West California ground, also struck the ledge. This demonstrates that the California ledge is of great size, rich, and continuous for at least 1,000 feet; how much further it may be traced is of course uncertain, but that it is a true fissure ledge is beyond a doubt; and the fact that there is one such in the district gives substantial reasons for the expectation that others as well defined will be found. The California is nearly on the southwestern limits of the Treasure Hill deposits, so far as known. The claims of the Metropolitan Company, Norfolk, Lodi, etc., etc.—believed to be very valuable—lie still lower down the hill, near the cañon in which the town of Silver Springs is situated.

Returning from the southern end of Treasure Hill toward the northern, we again come upon defined ledges. Treasure Peak is the name given to the bold crest of Treasure Hill directly north of Treasure City and east of the road to Hamilton. On the southern edge of this peak or crest is the Hidden Treasure Mine with its extensions. This mine—or one title to it (there are conflicting claims)—was recently sold for $200,000, apparently a very low figure. The first ore found here was in a large undefined mass, and the existence of a defined ledge was a matter of doubt; but recently immensely rich rock held together by horn silver has been struck in seams pitching into the hill,

and the deposit is assuming more and more the form of a ledge. Following around the abrupt eastern face of the hill, in the strata of dolomite which here crop out sharp and bare, is found a more or less broken line of deposits, apparently the outcroppings of the same ledge or deposit on which are located the two Hidden Treasure extensions, Morning Star, Hunt & Drynen, Rough and Ready, Laynes & Murphy, Mammoth, Oriental, Green Above the Red, Virginia, and other claims, the latter being well down the hill toward Hamilton. Descending the hill toward Hamilton the ore becomes somewhat more refractory in character, the purest metal being found as a rule on the top of the hill or toward the south in the direction of the Eberhardt. The Emmersley, Tremont—a promising location—John Dare and Julian & Dumont claims, showing much good metal, are situated directly east of Treasure Peak, lower down the face of the hill and in lower strata of the dolomite.

Turning to the left from the Hidden Treasure mine, running round Treasure Peak from the northwest, is found a line of croppings, apparently the outer edge of a continuous ledge, dipping away from Treasure Hill to the northward, on which claims are located as follows: Silver Sixpence, Little Bilk, Excelsior, Crown Point, Benito Juarez, North and South Vallejo, Echo, Mountjoy, Thirty-Second, Hornet, and Chicago. The Excelsior has been recently opened so as to show a perfectly defined ledge, two feet in thickness, and rapidly increasing as it runs into the hill to the northward. This ledge bears a black, conglomerate ore of a high grade; has a slate hanging and a limestone foot wall; and, though nearly horizontal at the surface, dips quite rapidly into the hill as it is exposed by the drifting. Fifteen thousand dollars in coin was offered and refused for a half-interest in this claim last week. In the Crown Point the ledge is also found, and work done along the line toward the northwest shows that the ledge deposit is rich and continuous, at least as far as the Vallejo, and not unlikely for some distance further.

Excelsior and Crown Point discoveries have created quite an excitement in that part of the district; they

were made by E. D. Rathbun, of Missouri, an old miner and worthy man, who is likely to make his pile out of them. We have thus defined ledges at the northern and southern ends of Treasure Hill. A thousand shafts and cuts sunk or run in the intervening ground—the majority of which have struck metal in some quantity—demonstrate that Treasure Hill, for a space of at least three miles north and south, and two east and west, is everywhere metalliferous at some depth; the only question is whether you strike the metal at ten feet or a thousand.

Is there now any chance for doubt of the permanency of the Treasure Hill mines? In the opinion of thew riter — who but recently thought differently — *none whatever.*

LOW GRADE ORES.

It must not be taken for granted that every mine in the White Pine District will "pan out" solid silver, or chloride almost equal thereto in value, like the Eberhardt. There is probably but one Eberhardt on earth; but there is in this district an incalculable amount of what White Piners call low-grade ores; they would be called first-class high-grade ores elsewhere, and in them the true wealth of the district is to be found.

Rev. Mr. White, State Mineralogist of Nevada, writing to the proprietors of the ALTA, in a letter highly eulogizing the description of the district given by the writer in November last, says:

"I know not that it makes any difference to the miner whether the ore is found in regular fissure-veins running perpendicularly, or in horizontal deposits, so long as there is abundance of it and it is easily reached, and quickly and cheaply taken out and washed. There is probably more immensely rich ore in the Eberhardt Mine than in any other ever discovered in the Pacific States—perhaps in the world; but the main reliance of the district is on the low-grade ores, yielding from $50 to $200 per ton, of which, in my opinion, made after three careful examinations of the district, *there is practically an inexhaustible supply.*"

The observation of the writer would confirm this view of the case to the fullest extent, and in the strongest possible manner. The following returns of the

practical working of ores—mostly second and third class—from claims scattered over the district, made at the Oasis Mill at Silver Springs during the last quarter of 1868, will give a fair idea of the range and character of the mineral deposits at White Pine:

	Pounds Worked.	Assay per Ton.
Aurora (Rathburn)	17,187	$439 82
Aurora (Rathburn), 2d class	4,197	81 68
Aurora (Stow)	23,857	81 68@ 97 29
Aurora	117,021	120 00
Buena Vista	9,494	67 92
California	11,131	234 62@329 87
Emersly	3,974	443 80
Eunice	11,441	163 36
Eberhardt dump	31,695	321 37@341 17
Hudson & Logan	7,020	236 20@401 61
Hidden Treasure	78,767	139 77@341 69
Montgomery	13,555	89 96@1,614 36
Post Hole	1,004	229 34
Romulus	6,000	491 67
Robert Emmet	134,367	302 34
Snow Drop	16,475	347 14@369 14
Santa Vila	19,281	157 86
Stonewall	134,000	235 62@461 80
Wadsworth	392	6,929 76

The mill-owners agree to return to the owners of the rock 80 per cent. of the assay value, and it is admitted that they work the ore up to a considerably higher figure. The present charge for working ore at the mills in this district is $50 per ton, and the amount realized over the 80 per cent. of the assay is in many cases no small item in addition, but with a dozen mills running, as there will be in a few months more, rates must decline 50 or 60 per cent—say to $25 or $20 per ton before the end of the year 1869.

TUNNELS.

In going down through the successive layers of slate, dolomite and silver in its various formations and combinations, no one has as yet, apparently, "touched bottom"—that is to say, found out where the silver finally gives out. In one or two places, at least, three successive layers of ore, alternating with strata of dolomite, have been cut through, and the opinion that the whole of Treasure Hill at least is metalliferous from its crest down to its foundations—1,500 or 2,000 feet perpendicularly—is beginning to obtain, and on the strength thereof many tunnel projects have been started. These tunnel companies propose to go down to a considerable distance below the workings on the different "flats," and along the eastern edge of the hill, and strike directly into the heart of the mountain—for it is nothing less; calling it a hill is a capital joke.

Whether they will succeed in striking it richer than ever, or waste hundreds of thousands of dollars in a vain search after lower deposits than any yet worked, is the problem to be solved by the stockholders. The promoters of the tunnel companies have full confidence in complete success, and there are many others who share their hope and confidence.

A NEW LEDGE THEORY.

Old miners in the White Pine District—among them Dr. E. X. Willard, of the Keystone—now incline to the theory that there are two distinct classes of metaliferous deposits or veins in White Pine District; the first in the form of horizontal deposits, probably of sedimentary origin, lying between the strata of bastard slate and dolomite or limestone, and pitching westward from the eastern edge of Treasure Hill; and the second, and more permanent, in the form of true fissure veins, ledges or lodes, standing at or near the perpendicular in the centre of the hill, and pitching outward at the north and south. These ledges cut directly through the horizontal deposits from east to west, and it is at the point of intersection of the two, in every case, that the richest and largest deposits of chloride, horn silver, and other immensely valuable forms and combinations of the precious metal are to be found. The recent developments in the Eberhardt and Keystone, and other mines in less degree, go far to prove the entire correctness and reliability of this new theory. All theories are dangerous, and only to be accepted and acted on with great caution by men investing capital and labor in mining enterprises; but this one has certainly all the elements of probability about it.

THE EBERHARDT.

The richest and most extensive deposit of silver in the district, so far as yet known, is of course the Eberhardt. The Eberhardt and Keystone—first located as separate claims—having been shown to be identical (being enclosed between parallel walls running across Treasure Hill east and west), have been, by mutual consent of holders, consolidated, the agreement taking effect February 1st, 1869, and will henceforth be worked by one company, which will soon be incorporated, with an office in San Francisco. The Richmond

claim, which runs into the Eberhardt from the south-east, having been defeated, after a warmly contested trial, at Austin, and the Blue Bell and Grey Eagle absorbed in the Eberhardt title, there is now a clear field before the Company, and work, which has been going on but slowly for some months, will again be pushed ahead with vigor. Visiting the Eberhardt last week with the foreman of the Company, John Bicknell, Esq., the writer went through the whole underground works, and was politely shown all points of interest. There are now fairly defined parallel north and south walls running westward into the hill. The south wall commences just below the old Blue Bell shaft, and forms the southern boundary of the Eberhardt, while the north wall forms the northern boundary of the Keystone ground, and both pitch slightly to the northward as they descend. The space between these walls is 183 feet from north to south, and a careful examination in the drifts, made step by step with the aid of lighted candles, and with hammers and picks, enables the writer to say with positiveness that the deposit of silver of wonderful richness is *unbroken from one to the other*. There is not a foot between the two walls where ore worth from $100 to $20,000 per ton cannot be thrown down with a pick and gad. Marks of the pick in solid silver could be seen all along the sides of the chamber, and in one place we noticed where an iron gad had been driven into the soft metal to a depth of four inches, and withdrawn, without even cracking the surface of the ledge. The Blue Bell shaft was then down 120 feet from the surface, close alongside the south wall, into and through which it cuts at 100 feet depth. To the point of 100 feet there is ore nearly all the way down, a "horse" occurring at 40 feet. Beyond the point where the vertical shaft cuts through the south wall, no ore has been discovered, but at about the same depth in the Keystone ground, just south of the north wall, exceedingly rich ore has just been struck. How far the walls now being followed run westward into the hill cannot of course be told at present, but the amount of treasure which it is already evident they inclose is beyond anything like sober calculation. The ore from

the Keystone and the Eberhardt ground—now in one mine—already reduced to bullion, or extracted ready for reduction, will approximate two millions of dollars, and there is no indication of a failing in quantity or quality at any point. The cash value of the mine as it now stands we will not attempt to estimate; it would take too many figures.

THE AURORAS.

Next on the list of well-developed mines, we may mention the Aurora (South), higher up the hill towards the summit. Work has been prosecuted with vigor all winter, and from 600 to 700 tons of rich ore can now be seen piled on the dump ready for milling, when the mills are ready to receive it and the state of the roads will admit of its being hauled. The description of the mine given in November last will hold good now. The last week's work uncovered better ore than ever before struck in the mine, and at a lower point.

The Aurora Consolidated, lying adjoining on the north, promises to be also one of the very valuable mines of the district. A contract for rock from this mine to keep a thirty-stamp mill running for a year has been made, and the mine is being gotten ready for working to the best advantage as soon as all the other arrangements have been perfected. The ore is of the same general character as that of the Aurora South, and there is no apparent reason why the stock should not be a richly paying investment.

NEW DISCOVERIES.

Great excitement was created a few weeks since by the discovery of rich deposits of chloride, much like that of the Eberhardt in character, on the southern slope of Treasure Hill, near the bottom, east of Silver Springs. The principal of these new claims so far are the Ruby and Mazeppa, which promise greatly. Standing on the bluff at the eastern end of the California ledge, we looked down upon a swarm of miners busily engaged in opening cuts and sinking shafts in all directions around these claims, the holes being often within 20 feet of each other, and the claims interlacing each other like spider webs. There will be a rich harvest there for the lawyers. The whole face of the hill from that point some distance eastward, and thence northwards to the Eberhardt, and so on

almost over to Hamilton, abounds with ledges and outcroppings more or less well defined, generally metal-bearing, and is dotted all over with claims, which are being actively prospected. Among the valuable discoveries lying southeast of the Eberhardt are the Lexington, Sarah, and Ida, judging from recent developments. Ore of high grade has been struck, and that locality is likely to prove a rich one. Crossing the Base Metal Range on the west, where the mineral deposits combine silver, lead, copper and antimony, and are not now worked for the reason that there are no smelting works ready to reduce the ores, Messrs. Berry and Jacobs, and others, have ascended almost to the summit of the White Pine Mountain proper, ten thousand feet above the sea level, and there found veins of rich, free working silver ore, which they will develope as soon as the terrible cold and snow storms now prevailing will permit—say 60 or 90 days hence. "Have any mines been worth working outside of the Eberhardt, Keystone, Aurora, Hidden Treasure, and a few others along the eastern edge of Treasure Hill, yet been discovered in White Pine?" is asked of us daily. Yes; not one, but hundreds! All—Pogonip, Chloride and Alta Flats—will pay for working; title, and the required depth to strike the metal, are the only questions remaining to be decided; and there are many locations off this belt on either side which are being developed or already developed into paying mines. The purchase of mines on Chloride Flat and elsewhere by a large association of capitalists, who propose to include them in one or more monster incorporations, has caused a temporary suspension of work in them, and the lack of mill facilities and the bitter cold will delay work in many others, but there are already mines enough opened in White Pine District to keep twenty 20-stamp mills running for years to come. Within one year fifty thousand people will find profitable employment in that district and those immediately outlying.

MILLS AND SMELTING WORKS.

There will soon be no lack of mill facilities in White Pine. At present there are but four mills there, viz.: the old Monte Cristo Mill, on the western side of White Pine Mountain; the Oasis Mill, of ten stamps, at Silver Springs; the White Pine Mill (Miller's), ten stamps;

and Felton's five-stamp mill at Hamilton. The Oasis, which belongs to the Eberhardt Company, is running all the time, but the stamps crush the rich ore faster than the pans can amalgamate it, and new pans will soon be added to enable it to work up to its full capacity. It can then turn out $10,000 in bullion per day. The White Pine Mill (Miller's) has been stopped on account of the giving out of the boiler, but a new boiler has been procured, and it is now running successfully and doing good work. McCone has a new ten-stamp mill of the best description already at Hamilton, and will have it running as soon as the weather will admit of out-door work. Kohler has just shipped a ten-stamp mill from this city, and Livingston Brothers will send one of 30 stamps there soon, to work the Aurora Consolidated ores. Three mills from the Washoe country, recently working the Savage ores, are being pulled down and removed there. The Santiago Mill, on the Truckee, has just been sold to go there. The Big Smoky Mill, of 20 stamps, is also on the way to Silver Springs; and Moore's mill, of eight stamps, will soon be running at a point just below the Oasis Mill. There is now a large furnace for smelting base metal ores at Silver Springs. It has not yet been tested, but will be in the spring when charcoal can be burned. There is also a smaller one up in Saw Mill Canon, on the west side of the Base Range, above Silver Springs. There is also another building up on the hill, near the Eberhardt, and Mosheimer's Company (the White Pine), from which great results are expected, will soon commence one on a large scale. A new steam saw-mill arrived at Hamilton last week, and will be set up immediately at a point twelve miles south of Treasure City. It will consume snow instead of water for making steam, and is expected to net a fortune to the lucky owners before spring opens. A new building-material, in the shape of light, pink-colored sandstone, has recently been brought out at Silver Springs. It is sold at 18 cents per square foot, ready dressed for use, and will greatly facilitate the erection of substantial buildings for mills, residences and business houses.

WATER WORKS.

Von Schmidt is actively at work surveying the ground and making preparations for the commencement of work

on his works, by which Treasure City and the other towns —Treasure City in particular—are to be supplied with water. It is thought possible to dispense with one of the hoisting stations on Treasure Hill, and thus reduce the cost considerably, but the point is not yet decided. At Hamilton water from wells and springs is peddled about town by men on foot at the rate of 25 cents per bucket, at which price it is abundant. At silver Springs it is abundant at the same rates, or less. On Treasure Hill there is not a drop of water except what is made from snow melted over fires and peddled around at 25 cents for small buckets and 37½ cents for large buckets. This snow-water produces irritation of the bowels, and is considered dangerous if used too freely. Whiskey is recommended in its place. In justice to the people of the district we must say that they generally show a disposition to manfully conquer their prejudices, and, restraining the temptation to indulge in water, swallow whiskey with as much grace as if they liked it from the start. The early completion of Von Schmidt's water works can alone save Treasure City from almost total destruction by fire at no distant day. A fire now would sweep all before it.

At Silver Springs T. M. Luther, the assayer for the Eberhardt and other mines, and his partner, Mr. Huey, are engaged in running a tunnel through under the town from the forks of the cañon below the Oasis Mill, to tap several streams of water which have been found in well-digging, descending from the mountain at a distance of twenty or thirty feet below the surface. They have an open cut 200 feet in length, and the tunnel will be 600 feet more, making 800 feet all told. They expect to get at least twenty inches of water—enough to furnish more than a dozen mills of ten stamps each working by the dry crushing process. The enterprise, if successful, will be of incalculable benefit to the town and district.

CONDITION OF SOCIETY.

The majority of the residents of White Pine District to-day are well-educated, enterprising and orderly American citizens. As a rule a better class of men were never seen in any community, and the best order has hitherto prevailed, but rougher times are ahead. Thieves, robbers, murderers, prostitutes, gamblers, and desperadoes of every stamp and nationality, are hurrying thither-

ward, some of them red-handed from recent deeds of wanton bloodshed, and a reign of terror, or a Vigilance Committee which will execute speedy and unsparing punishment on all offenders, is inevitable. One or the other must come very soon, and the citizens of the three towns should organize at once. There is no time to be lost; let them remember the scenes at Green River and be prepared. Wages, where men can work at all, are high, and all expenses of life are enormous. Miners get $5 per day; carpenters, $6, $7, $10. There is no lack of money, and good claims sell on the ground at fabulous prices; the poor or worthless ones are sent to San Francisco to be incorporated—we could name some of the wildest of these cats if necessary. Let us be understood; there are several good mines already incorporated and put on this market, but there are others wholly worthless; and, as a rule, a really good mine will sell better in White Pine than in San Francisco. The excitement everywhere is intense. Lots jump up in value sometimes hundreds of dollars in a day. A lot on Main street, in Treasure City, sold for $1,200 in November, was again sold, in the writer's presence, last week, for $4,500, and $500 was offered for the bargain before the purchaser had got his deed acknowledged. Bummers, who strike you for "a piece," drink whiskey, huddle around the fires and swap lies from morning to night, are as thick as flies in August. Lots are claimed by the dozen, and being surrounded by sticks set thirty feet apart, with a single strip of raw hide half an inch in width, stretched from one to another, are considered "fenced." Personal occupation and a good revolver constitute a clear title, whatever the records at Austin may say. Sixty lots in Treasure City were jumped in one night a few days since, and twenty or thirty is a low average, showing a momentary dullness in the real estate market. There is a constant explosion of blasts in a thousand prospecting shafts, the air is filled with flying rocks from the "shots," as they are called, and one might well fancy he listened to the roar of a regular battle. There are many women and a few ladies there already—the latter have no business there now, and had better keep away. The streets are filled with teams, coming from Elko and Austin with goods, and treasure-seekers are arriving at the rate of fifty

to one hundred daily. Many come without a dollar, plodding along on foot through the snow, begging or sparring their way. They must beg, steal or starve before the winter is over. Society, properly speaking, there is none, and the community is in a wild, seething, chaotic transition state. Wells, Fargo & Co. have offices in all three towns, and send off letters by the thousand daily. The Union Express Company have also now offices in all the above places. Branches of the Bank of California are being established, and there will be no lack of banking facilities soon. The Western Union Telegraph Company is building a line there; a railroad will come within a year. Gamblers swarm, and there are as many as a dozen games in full blast in one building at Hamilton.

COST OF LIVING, ETC.

A cup of coffee and slaughter-house steak cost $1; a bed, hay mattress and blankets—crickets thrown in—$1. Apples, 25 cents. each, and chickens $5 apiece, and scarce at that. Flour is $17 per 100 lbs., and meats 35 to 50 cents per pound. Canned fruits and vegetables are abundant at $1 per can, and potatoes 20 cents per pound. There are some 50 or 60 Chinese in the district, engaged in cooking and washing. By clubbing together and hiring a room, with one of them to cook for them, five or six men can live at $60 per month each. Wood, cut within 40 rods of town, is sold at $3 to $5 the jackass-load. Hay is $200 per ton, barley 15 cents per lb. A friend kept four horses at Hamilton four days, and his bill was $84. To ride from Hamilton to Treasure City costs from $2 to $3, and we saw $17 paid for hauling a ton of freight up the same hill. Merchandise of all kinds is pouring into the district by wholesale, and the market is bound to be glutted within a few weeks, when many who have paid twenty cents per pound for freight will be badly injured.

THE WEATHER.

Until nearly the first of February the weather in this district was fine, and prospecting went on in spite of the cold nights. Then heavy storms set in, and the snow is now twelve inches to three feet deep everywhere in the district. On Sunday, January 21st, at daybreak, the thermometer at Hamilton was at eight degrees below

zero, and twelve or fifteen at Treasure City, while the wind was sharp enough to cut one through; no one could face it many minutes. That is what is the matter now.

WHEN TO GO THERE.

When spring opens, fairly, and not before. Why not now? Simply because you can see nothing, and do nothing, at present. Mines already opened can only be bought for fortunes of $10,000 to $5,000,000, and you cannot open new ones until the snow goes off. "A little capital" is of no account there just now, because there is more money in the community than in San Francisco ten times over, in proportion to the population, and everybody mad to invest. "I expect to suffer some, but I want to get there just ahead of the rush." Bless you, that is just what everybody is saying and has been saying for months. The rush is already going on, and a rush back is bound to come. You can afford to wait in San Francisco, since you can gain nothing by going there now. How many of those who wintered in Virginia or Gold Hill the first season and suffered everything made a cent out of it? Ask yourselves this and reflect. On the 14th of June last fifteen inches of snow fell at Treasure City. It will not be necessary to hurry there with mosquito nets and ice-cream freezers for some time to come. Winter has really but just set in there.

From the Alta of February 18th, 1869.

AGRICULTURAL AND OTHER RESOURCES OF THE COUNTRY.

Within the bounds of White Pine District proper there is little if any land which could be made to pay for cultivation. There is no large tract of soil, and if such was to be found it would hardly pay for tilling, owing to the shortness of the season and low temperature at an altitude of 7,000 to 10,000 feet above the sea. But immediately outside of this district there is an abundance of the very best grazing and arable land, which will this season be made to yield large and highly remunerative crops. To the southward there is little cultivatable land, but some

good grazing country, plenty of white sage and bunch-grass for winter pasturage for horses and cattle, within fifty or sixty miles, beyond which the country is so little explored that its resources cannot be spoken of with confidence.

We know but little of the country lying directly eastward. To the westward there is abundance of summer and winter pasturage, with water at considerable intervals, but no farming country worth mentioning until some distance beyond the Diamond Mountains. But to the northward things promise far better. Stretching from the Centenary Mill, in the Newark District, on the eastern side of the Diamond Range, northwards to the point where the stage road to Elko crosses the South Fork of the Humboldt River, is an open valley country, abounding with springs, lagunas, and small streams of living water—in many of which fish are found—well grassed, and containing hundreds of thousands of acres of rich black loam, or light clayey soil, which will richly repay cultivation. Barley, oats, wheat, potatoes, cabbages and other vegetables will yield largely in this valley, with or without irrigation, and as the road to Elko passes directly through it, the farmer can be sure of the most remunerative prices for everything he raises. The whole country abounds in hot springs, of immense extent, the waters of which are densely charged with soda, sulphur and other mineral substances, but the chalk springs generally furnish wholesome water. The earth is covered with alkaline efflorescence in many places, but this does not in the least affect the crops named. Potatoes grown in this soil are the best found in the United States, not even excepting those grown in Humboldt County, California; and barley yields finely. The land is now most of it unoccupied, and we presume open to pre-emption and purchase at Government prices. Crops can be put in there late in the spring, and a good yield secured. Round Valley, Long Valley, and Butte Valley, lying to the northeastward of White Pine, from twenty to fifty miles distant, will each afford a large amount of pasturage, and Steptoe and Schell Valley, lying east of them, are said to contain a considerable area of cultivatable land. Ruby Valley, fifty miles to the northward of Hamilton, and fifteen to twenty miles east of the Hamilton and Elko road, is the

finest in the State of Nevada, that of Carson perhaps alone excepted, and being already settled and extensively cultivated, will yield a vast quantity of grain and vegetables for the benefit of the White Pine District this year. There is no good reason why hay should not be worth more than $50 per ton delivered in Hamilton, another season, while it may sell for less, and the county of White Pine can eventually produce barley, potatoes and vegetables enough for a population of thirty, forty or fifty thousand people and the proportionate number of working animals.

WOOD AND TIMBER.

Of wood there is likely to be no lack for several years to come, though this is not what would be called a timbered country. Nearly all the hills and mountain sides throughout the new country are covered with juniper cedar, which makes good fuel and is easily cut and handled. The cañons in the White Pine District, in the immediate vicinity of Hamilton and Silver Springs, contain large quantities of mountain mahogany, which makes unequalled fuel, and the nutpine which is found in the same region makes fine firewood and charcoal, which for smelting and refining silver is preferred to that of any other timber. There is, therefore, no immediate want of firewood in the district.

Within the present month bituminous shale, which burns freely in an open fire, and is supposed to indicate the immediate vicinity of coal, has been struck within two and a half miles of Hamilton, on the east, and even if coal is not ultimately discovered, the material already found may prove highly valuable for fuel, as it resembles that found near Elko, which, for generating steam, is said to equal a fair article of bituminous coal.

Of large timber for sawing into lumber, and general building purposes, there is a lack, the supply on White Pine Mountain proper being only sufficient for immediate use and indifferent in quality, and certain to be soon exhausted. However, there is a moral certainty that a branch railroad to Hamilton from Elko or its vicinity will be constructed within eighteen months, probably within the present season, and supplies of the finest lumber, fuel and timber for mining and building purposes will then be received directly and cheaply from the Sierra Nevada.

OUTLYING DISTRICTS.

Immense as has been the amount of prospecting done in the White Pine District, there are, doubtless, still new discoveries of value yet to be made in the immediate vicinity of Treasure Hill. But it is outside of the White Pine District proper that the greatest amount of prospecting will be done this season. From the Grant and Troy Districts, fifty to sixty-five miles to the southward, come reports of immense discoveries. Well defined veins of ore, assaying fully up to the average of White Pine, are said to have been found, and there is certain to be an immense rush in that direction when the snow melts away. The writer will visit those districts as early as practicable, and give the readers of the ALTA the result of his observations.

The western side of the White Pine Mountain, where the district was first organized, and where the Monte Cristo Mill is situated, is known to be comparatively rich in mineral deposits, and will, doubtless, be more carefully and searchingly prospected next summer than ever before.

Forty miles to the westward of Hamilton, on the western side of the Diamond Mountains, five miles south of Trefren's Station, is the Eureka District, which but for the discovery of White Pine would now be creating a sensation in the world. The writer climbed over the Diamond Range, on foot, in a terrible snow storm, on the 30th of last month, to pay this district a visit, and was well repaid for his trouble. The general formation of the district is somewhat like that of the White Pine, but the country rock has been more upheaved, broken and displaced, is harder, and the metaliferous deposits are less regular and easily traced, while the ore is generally of a more refractory character, the silver appearing in combination with lead and other base metals to such an extent as to require working by furnace process. The district was discovered before White Pine, and an Eastern Company—the Tannerhill—wasted a considerable sum in very scientific tunnelling, then suspended work, leaving the rich rock, which they had taken out to get it out of their way in running into the hill, lying piled up on the hillside, where it still remains untouched. A little work has been done on a great number of claims, but,

unfortunately for the district, so little in any one place that it is as yet impossible to say whether there are or are not well-defined fissure ledges to be found there. Mr. A. Munroe, the Recorder of the district, who is directing most of the work now being done there, and owns two-thirds of the claims in the district, showed the writer some of his mines, which certainly promise well. They are situated a mile from his headquarters, in a cañon leading into a spur of the mountains to the southwest. The hard, dark lime rock here pitches westward, about as it does at White Pine, but it is cut across from north so south by harder ledges of redish quartzite, which has been forced up through it in immense ledges four hundred feet above the bottom of the cañon. The ore crops out in a line of deposits running through the face of the limestone from the bottom of the cañon nearly due west up to the immediate vicinity of the quartzite cross ledge. This ore is of a mixed character, in places partaking of the appearance of the chlorides of White Pine, and again of the black conglomerates of the Noonday and other claims on Chloride Flat, and again a few feet away running into oxides and carbonates of lead, rich in silver, but only workable by furnace process. The richest of these claims appears to be the Gem, from which quite a number of tons of ore were worked after roasting at the Manhattan Mill at Austin, yielding $344 per ton. Ore of the same quality is still being taken from this claim, and hauled to Austin for working. The shaft, down 20 feet, shows large masses of the ore, and the appearance of calc-spar at intervals, and other promising indications, lead to the hope that a defined vein may soon be struck. In the immediate vicinity of the Gem are the Ruby, Topaz and Amethyst, which are more or less of the same character, and just south of the Buckeye, which shows an abundance of outcroppings of dark greyish ore, ranged in a line running from east to west up to the edge of the quartzite cross ledge, and presents indications of a regular ledge beneath. Samples broken off from these croppings by the writer assayed $102 82 in silver. Two miles further south is what is known as Mineral Hill, which is apparently made up of carbonates and oxides, and other formations and combinations of lead and silver only workable by smelting process. The extent of these deposits

is immense, and if the large smelting furnace now nearly completed by San Francisco capitalists, under the direction of Mr. Stadfeldt, in the cañon just below Mr. Munroe's place, works successfully when completed, there is a world of wealth to be realized by the holders of the claims in this district. Mr. Munroe had some ten thousand bushels of charcoal burned ready for the furnace, and wood ready for several thousand more, when the writer visited the district. This district is worthy of more attention than it has heretofore received, and the present is a good time to obtain interests there.

From the Eureka District the writer recrossed the Diamond Mountains to the Newark District, on the east side of the point where the Hamilton and Elko stage-road strikes the range. Here is the Centenary Mill, of twenty stamps, with eight large roasting-ovens, one of the best arranged and most complete mills east of the Sierra Nevada. It belongs, together with the mine (situated about a mile back of the mountain to the westward, in Minnehaha Cañon,) to a company in Newark, New Jersey. Mr. Samuel H. Folsom, the excellent Superintendent, accompanied us to the mine and showed us many points of interest. The mountain is composed of dolomite lying in strata, pitching westward, exactly as at White Pine; and a person standing at the mill and looking up toward the summit would see precisely the same disposition of country rock as if he stood on the east side of Treasure Hill, but the rich chlorides are wanting. The ledge belonging to the company cuts sharply across the dolomite, running from north to south, and cropping out from the bottom of the cañon to the top, some 300 feet perpendicular on both sides, pitching on either hand a little to the westward. It is quite narrow, and is composed of hard quartz, showing a good quantity of silver, and has well defined casings or walls of dolomite throughout. Something like $100,000 has been taken from this ledge. At present there is but a little rock in sight, and as the dead work is very expensive, owing to the hardness of the casings, Mr. Folsom very judiciously confines operations to taking out the best ore, not judging it expedient to spend large sums for the Company in barren feats of scientific engineering. Most of the ore will work up to $200 per ton, but requires roasting. Some of the speci-

mens of silver, in combination with antimony, taken from this mine, resemble the finest fresh-broken cutler's steel, and are beautiful beyond description. The mill under Mr. Folsom's direction turned out between $300,000 and $400,000 in bullion, from White Pine rock, in the last six months of 1868, and as it is on the direct road from Elko to Hamilton, and ore taken on as return freight can be hauled to it at low rates, it will probably have considerable work from that source this year.

Across the Diamond Range from the Centenary Mill is the Diamond District, which is said to contain a large number of ledges as yet unprospected to any extent. Nothing is now being done in that locality.

EXTENT OF THE NEW SILVER FIELDS.

From Northern Idaho to the Mexican line, and how much beyond no one knows, is a belt of country of which White Pine appears to be the centre, through which rich deposits of silver are known to be scattered, and all of which is worthy of a careful examination. It is said that the formation of the famous Batopilas Mining District of Chihuahua is almost identical with that of White Pine, and the writer has seen beautiful specimens of silver ore taken from mountains of a somewhat similar formation in the heart of the Apache country, south of Prescott, Arizona. What a field is here opened for the investigation of the adventurous American people! The gold deposits of California added so many millions to the wealth of the world as to unfix values and affect the whole commerce of Christendom. What California did with her gold, this new Silver Land is apparently about to do with its silver, and no one can predict the extent of the effects which will be produced on our country by the recent discoveries and those to which they will most certainly lead during the coming summer and autumn.

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ALTA CALIFORNIA PRINTING HOUSE.

THIS Establishment has been in operation since the year 1849, and has become celebrated throughout the Pacific Coast for the elegance and promptness with which orders have been executed. The patrons and proprietors, as evinced by the continually increasing orders from the older portion who have been in the habit of patronizing their work here. OUR JOB TYPES and PRINTING MATERIALS are the most beautiful that could be selected, and work in connection With Lawton Power Printing Press, such as—

Books, Pamphlets, Insurance Policies,
Manifolds, Receipts, Bills of Lading,
Cards, Translations, Programmes,

at every variety, with appropriate words from the purest Gold, and most Golden Oxides to the most Showy Posters.

Business is expected at this office on the ground that the Japanese will seek his own interest, and give his orders where he can have them executed on the best advantages in quality and price.

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